

OIB - HU-25C Guardian 09/30/15 Science Report

Aircraft:

[HU-25A Guardian #525](#) ([See full schedule](#))

Date:

Wednesday, September 30, 2015

Mission:

OIB

Mission Location:

Thule, Greenland

Mission Summary:

Mission: Falcon Zachariae-79N (priority: medium)

This mission reoccupies the centerlines of the Zachariae and 79N glaciers. It is similar to the Zachariae-79N flight planned (but not flown) for Spring 2015, except that we removed the IceSat-1 grid over the lower portions of the glaciers. We transit to and from the northeast region along a historical ATM lines dating back to 1994, and along an as-yet unflown master grid line.

Weather today was quite poor again, with northwestern Greenland completely obscured by clouds associated with a low-pressure system which came ashore overnight from Baffin Bay. A more powerful low-pressure system is forecast to approach the area during the day today and overnight, and it is likely that this system will close the Thule airport for at least portions of the next two days. Thus today may be our last flight opportunity until Monday. Fortunately, strong offshore flow and clear skies prevailed over much of northeast Greenland, so we selected this medium-priority flight for this afternoon, after flying the high-priority flight in the same region this morning.

All instruments performed well today. The cloudiness across northwestern Greenland prevented our instruments from collecting more than isolated data between Thule and the main ridgeline of the ice sheet, but we successfully collected data for all of the eastern half of the flightline. We flew the outbound transit at 35,000' MSL, the glacier centerlines at 29,000' MSL, and the westbound transit at 35,000' MSL.

We conducted a ramp pass at 3000' MSL.

Data volumes:

DMS: 11.0 Gb

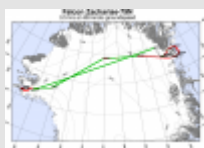
Narrow Swath ATM: 22 Gb

FLIR: 1.7 Gb

total data collection time: 3.7 hrs

Images:

Map of Falcon - Zachariae/79N



[Read more](#)

Melt pond near Zachariae Glacier



[Read more](#)

Sea ice lead near Zachariae Glacier



[Read more](#)

Submitted by:

John Sonntag on 09/30/15

Related Flight Report:

HU-25C Guardian 09/30/15

Flight Number:

OIB2015 Arctic Zachariae-79N

Payload Configuration:

ATM & DMS

Nav Data Collected:

No

Total Flight Time:

3.9 hours

Submitted by:

Luci Crittenden on 09/30/15

Flight Segments:

| | | | |
|---------------------------|--|----------------|------------------|
| From: | BGTL | To: | BGTL |
| Start: | 09/30/15 16:43 Z | Finish: | 09/30/15 20:36 Z |
| Flight Time: | 3.9 hours | | |
| Log Number: | 15F005 | PI: | John Woods |
| Funding Source: | Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year | | |
| Purpose of Flight: | Science | | |
| Comments: | OIB completed the Zacharia-79N mission out of Thule today, thus completing 2 data flights today. Weather permitting, we will try for another data flight tomorrow, Thursday 1 Oct. | | |

Flight Hour Summary:

| | 15F005 | 16F002 |
|---|--------|--------|
| Flight Hours Approved in SOFRS | 100 | |
| Flight Hours Previously Approved | | 67.4 |
| Total Used | 32.6 | 65.3 |
| Total Remaining | | 2.1 |

16F002 Flight Reports

| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining |
|--------------------------|---|-------------------|----------|---------------|-----------------|
| 10/05/15 | OIB2015 Arctic Sea Ice Central | Science | 3.6 | 3.6 | 63.8 |
| 10/05/15 | OIB2015 Arctic Sea Ice East | Science | 3.8 | 7.4 | 60 |
| 10/06/15 | OIB2015 Arctic Ice-Sat2 North | Science | 4 | 11.4 | 56 |
| 10/07/15 | OIB2015 Arctic Transit Thule to Kangerlussuaq | Transit | 2 | 13.4 | 54 |
| 10/08/15 | OIB2015 Arctic Southwest Coastal A | Science | 3.8 | 17.2 | 50.2 |
| 10/08/15 | OIB2015 Arctic Thomas-Jakobshavn 01 | Science | 3.7 | 20.9 | 46.5 |
| 10/09/15 | OIB2015 Arctic Umanaq B | Science | 3.9 | 24.8 | 42.6 |
| 10/13/15 | OIB2015 Arctic Jakobshavn Eqip Store | Science | 2.9 | 27.7 | 39.7 |

| | | | | | |
|--------------------------|---|---------|-----|------|------|
| 10/13/15 | OIB2015 Arctic Southeast Coastal A | Science | 3.6 | 31.3 | 36.1 |
| 10/18/15 | OIB2015 Arctic Southeast Coastal B | Science | 4.1 | 35.4 | 32 |
| 10/19/15 | OIB2015 Arctic Helheim-Kangerdlugussuaq | Science | 3.7 | 39.1 | 28.3 |
| 10/19/15 | OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B | Science | 3.9 | 43 | 24.4 |
| 10/20/15 | OIB2015 Arctic Jakobshavn Mop-Up | Science | 3.7 | 46.7 | 20.7 |
| 10/20/15 | OIB2015 Arctic Southwest Coastal B | Science | 3.7 | 50.4 | 17 |
| 10/21/15 | OIB2015 Arctic Southwest Coastal C | Science | 3.4 | 53.8 | 13.6 |
| 10/21/15 | OIB2015 Arctic K-EGIG-Summit | Science | 3.7 | 57.5 | 9.9 |
| 10/22/15 | OIB2015 Arctic Mopup South | Science | 2 | 59.5 | 7.9 |
| 10/22/15 | OIB2015 Arctic Ferry BGSF-CYYR | Ferry | 2.2 | 61.7 | 5.7 |
| 10/23/15 | OIB2015 Arctic Ferry CYYR-KRIC | Ferry | 3.3 | 65 | 2.4 |
| 10/23/15 | OIB2015 Arctic Ferry CYYR-KRIC | Ferry | 0.3 | 65.3 | 2.1 |

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Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

| 15F005 Flight Reports | | | | | |
|-----------------------|-------|-------------------|----------|---------------|-----------------|
| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining |

| | | | | | |
|--------------------------|--|---------|-----|------|------|
| 09/15/15 | OIB #1 | Check | 2.7 | 2.7 | 97.3 |
| 09/20/15 | OIB #2, 3, 4 | Ferry | 2.7 | 5.4 | 94.6 |
| 09/21/15 | OIB #2, 3, 4 | Ferry | 2.3 | 7.7 | 92.3 |
| 09/21/15 | OIB #2, 3, 4 | Ferry | 2 | 9.7 | 90.3 |
| 09/23/15 | OIB2015 Arctic North Central Gap 02 | Science | 3.9 | 13.6 | 86.4 |
| 09/24/15 | OIB2015 Arctic Northwest Coastal A | Science | 3.7 | 17.3 | 82.7 |
| 09/25/15 | OIB2015 Arctic Northwest Coastal B | Science | 3.8 | 21.1 | 78.9 |
| 09/28/15 | OIB2015 Arctic Sea Ice West | Science | 3.7 | 24.8 | 75.2 |
| 09/30/15 | OIB2015 Arctic North Central Gap 01 | Science | 3.9 | 28.7 | 71.3 |
| 09/30/15 | OIB2015 Arctic Zachariae-79N | Science | 3.9 | 32.6 | 67.4 |